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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,984	07/10/2003	Sang-Whook Kim	1293.1747	1247

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EXAMINER

HALEY, JOSEPH R

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/615,984	Applicant(s) KIM ET AL.	
	Examiner Joseph Haley	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17-22, 27, 28, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-5, 7-8, 10-11, 13-15, 17-18, 20, 27-28 and 32 is/are rejected.
- 7) ☒ Claim(s) 3, 6, 9, 12, 19, 21, 22 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Oonishi (US 5295125).

In regard to claim 1, Oonishi teaches a method of identifying a type of a disc, comprising: detecting an RPM (Rotation Per Minute) of the disc; and identifying a first disc type by comparing the RPM with a first reference value (fig. 6 see also column 7 lines 65-68 and column 8 lines 1-6).

In regard to claim 2, Oonishi teaches identifying of the first disc type includes determining whether the disc is a DVD(-) type or a DVD(+) type (Oonishi teaches discriminating between a CD and a DVD. A DVD must be either a (+) or a (-).

In regard to claim 8, Oonishi teaches an apparatus identifying a type of a disc, comprising: a motor rotating the disc; and a system controller identifying the type of the disc by comparing an RPM of the disc detected using a frequency signal generated at the motor with a first reference value (fig. 6 see also column 7 lines 65-68 and column 8 lines 1-6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-5, 10-11, 13, 15, 17-18 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oonishi in view of Ono et al. (US 6822936).

In regard to claim 4, Oonishi teaches all the elements of claim 4 except measuring reflectivity of the disc; and identifying a second disc type between a one-time recordable type and a re-recordable type by comparing the reflectivity of the disc with a second reference value.

Ono et al. teaches measuring reflectivity of the disc; and identifying a second disc type between a one-time recordable type and a re-recordable type by comparing the reflectivity of the disc with a second reference value (fig. 2 element 2090).

The two are analogous art because they both deal with the same field of invention of discriminating optical discs.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Oonishi with the Ono et al. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Oonishi with the Ono et al. because it would allow a user to determine whether or not a disc can be re-written.

In regard to claim 5, Ono et al. teaches identifying of the second disc type includes determining that the disc is the one-time recordable disc type if the reflectivity

is higher than the second reference value and that the disc is the re-recordable disc type if the reflectivity is not higher than the second reference value (fig. 2 element 2090).

In regard to claim 10, see claim 4 rejection above.

In regard to claim 11, see claim 5 rejection above.

In regard to claim 13, Ono et al. teaches measuring a reflectivity of light from a disc to identify the disc format as a one-time re-recordable type if the reflectivity is higher than a reflectivity reference value and as a re-recordable type if the reflectivity is less than the reflectivity reference value (fig. 2)

Oonishi teaches measuring an RPM of the disc to identify the disc format as a DVD(-) type disc if the RPM is lower than a speed reference value or as a DVD(+) type if the RPM is higher than the speed reference value (fig. 6 see also column 7 lines 65-68 and column 8 lines 1-6).

In regard to claim 15, Oonishi teaches the measuring the RPM comprises using a frequency signal generated by a motor that rotates the disc (fig. 1 element 60 the rotary motor generates a frequency signal to move the motor).

In regard to claim 17, see claim 14 rejection above.

In regard to claim 18, Ono et al. teaches setting the reflectivity reference value to identify the disc as a DVD-R or a DVD+R type if the reflectivity is between 45% and 80% and as a DVD-RW or DVD+RW type if the reflectivity is between 18% and 30% (paragraph 74).

In regard to claim 32, see claim 13 rejection above.

Claims 7, 14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oonishi in view of Ono et al.

In regard to claims 7 and 14 Oonishi teaches all the elements of claim 7 except the detection of the RPM is performed after converting a motor control mode rotating the disc into a CLV (Constant Linear Velocity) servo mode based on a wobble signal.

The examiner takes Official Notice that to use a wobble signal for speed control is well known in the art and would have been obvious to use. The rationale is as follows: It would have been obvious to provide the apparatus of Ono et al. and Oonishi with wobble speed control because it is considered an equivalent alternative to other methods of speed control (see MPEP 2183).

In regard to claim 20, it is inherent that there would be stable motor control if the disc is identified as any type of disc.

Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagawa et al (US 2005/0270924) in view of Ogihara (US 6868051).

In regard to claim 27, Yanagawa et al. teaches an RF (radio frequency) amplifier that produces a push-pull signal from light received from a disc; a wobble detector that filters a wobble signal from the push-pull signal (paragraph 67); a spindle motor that rotates the disc based on FG signals (paragraph 37) but does not teach a system controller that identifies the disc type from the wobble signal.

Ogihara teaches a system controller that identifies the disc type from the wobble signal (see fig. 4).

The two are analogous art because they both deal with the same field of invention of discriminating types of discs.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Yanagawa et al. with the wobble signal of Ogihara. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Yanagawa et al. with the wobble signal of Ogihara because it would reduce the time to discriminate discs.

In regard to claim 28, Yanagawa et al. teaches all the elements of claim 28 (see claim 27 rejection above) except a system controller that identifies the disc type from the wobble signal and a bandpass filter having a filter coefficient at a frequency of 145 KHz.

Ogihara teaches a system controller that identifies the disc type from the wobble signal (see fig. 4) and a bandpass filter having a filter coefficient at a frequency of 145 KHz (see column 6 lines 34 and 35. 140 KHz is considered to be the same as 145 KHz).

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ono et al. in view of Yanagawa et al.

In regard to claim 30, Ono et al. teaches comparing a disc reflectivity with a first reference value; and identifying the disc as a DVD(R) type if the reflectivity is higher than the first reference value and as a DVD(RW) if the reflectivity is lower than the first reference value (see fig. 2) but does not teach generating FG signals from a spindle motor; and measuring an RPM of the disc using the FG signals.

Yanagawa et al. teaches generating FG signals from a spindle motor; and measuring an RPM of the disc using the FG signals (see claim 27 rejection above).

The two are analogous art because they both deal with the same field of invention of discriminating types of discs.
invention of discriminating types of discs.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Ono et al. with the FG signals of Yanagawa et al. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Ono et al. with the FG signals of Yanagawa et al. because it would provide speed control.

Allowable Subject Matter

Claims 3, 6, 9, 12, 19, 21-22, 31 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The prior art fails to teach all of the elements of claims 3, 6, 9, 12, 19, 21-22, 31 in combination with any other reference.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

Applicant's arguments filed 4/3/06 have been fully considered but they are not persuasive. On page 9 paragraph 2 lines 2 and 3 applicant argues that Oonishi fails to disclose "identifying a first disc type by comparing the RPM with a first reference value". The examiner maintains this rejection because as shown in fig. 6 of Oonishi time t1 is used as a reference value for the time it takes for the RPM to reach that value. Therefore this anticipates this claim.

Applicant's arguments with respect to claim 27 have been considered but are moot in view of the new ground(s) of rejection.

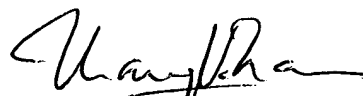
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Haley whose telephone number is 571-272-0574. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jrh



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PRIMARY EXAMINER